

(c) REMARKS

The pending Claims are 1-15, of which Claims 1, 4, 14 and 15 are in independent form. Claims 1, 4, 14 and 15 have been amended to define more clearly what Applicants regard as the invention. Support for these changes is located throughout the specification, and particularly at page 11, paragraph 31, and Figure 1. Claim 6 has been amended solely in regard to its dependency, and Claim 12 has been amended to more distinctly define the subject matter being claimed. Favorable reconsideration is respectfully requested.

The Examiner has rejected Claim 6 under 35 U.S.C. § 112, second paragraph, for insufficient antecedent basis in the phrase “third transparent member”. To obviate this rejection, Applicants have amended Claim 6 to properly depend from Claim 5, which recites first and second transparent members. The Examiner has also rejected Claim 12 under 35 U.S.C. § 112, second paragraph, in the use of “circle of least confusion”. This claim has now been amended to recite in place “circular region in which a pencil of light rays has a largest average energy density”, with support at [0042], especially at page 15, lines 3-6, of the specification. Thus, no new matter has been added. Accordingly, it is respectfully submitted that all of the claims now satisfy the requirements of 35 U.S.C. § 112.

Claims 1-5, 7-11 and 13 stand rejected based on U.S. Patent No. 6,125,226 (Forrest et al.), either alone or in view of the secondary references of Wilson, Biebuyck or Matthies for the reasons expressed in paragraphs 5-23 of the Office Action. The reasons for the rejections are respectfully traversed.

Prior to addressing the grounds of rejection, Applicants wish to briefly review certain key features and advantages of the present claimed invention. Claim 1 is directed to an organic electroluminescent display comprising an organic electroluminescent device, having a microcavity structure, for emitting light resonating in the microcavity structure. In a particularly important aspect, Claim 1 recites a light-gathering structure, overlying the organic electroluminescent device, for gathering the light emitted from the organic electroluminescent device, and a light-shielding layer, overlying the light-gathering structure, having an opening through which a portion of the light gathered by the light-gathering structure passes.

An illustration of this feature may be seen by referring, for example, to the specification at page 11, paragraphs 31-32 and Figure 1. This configuration is advantageous because it enables the present invention to overcome the problem of color purity deterioration. As indicated in Figure 7, color purity deteriorates depending on the observation position. Specifically, display quality degrades when the color of the emitted light observed in a direction diagonal to the organic electroluminescent device is different from that of the emitted light observed in the direction facing the device. *See* specification, page 5, paragraph [0011]. As can be seen from Figure 1, when an organic electroluminescent device comprises an overlying light-gathering structure, with a light-shielding structure additionally overlying the light-gathering structure, color purity can be vastly improved.

With regard to the art rejection, the MPEP makes clear that, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either

expressly or inherently described, in a single prior art reference.” MPEP § 2131 at 2100-73 (quoting *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” MPEP § 2131 at 2100-73 (quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)).

Forrest does not recognize the problem of color purity degradation resulting from differences in observation position. As understood by Applicants, the arrangement of elements in Forrest as illustrated in Figure 2C is not the same as the microcavity structures of the present invention. Unlike the multi-layer dielectric mirror layer 14 and the reflective cathodes 11 that form optical resonator structures, in Forrest the light emitting device 100 is comprised of a waveguiding layer 112 which has “a top surface, a bottom surface, and at least three sides”, arranged so that any light rays emitted from the OLED 113 are multiply-reflected off the different surfaces before being directed out through the opening 115. *See Forrest*, Column 3, lines 38-40.

The differences in structure between the configuration of Forrest and the present claimed invention results in a difference of light-emission efficiency. In Forrest, the light ray emitted from OLED 113 is reflected off the various surfaces 111, 113 and 217 several times prior to being emitted through opening 115. *See* Figures 2A-2C. This multiple reflection causes a decrease in light-emission efficiency because, regardless of the angle of emission, all of the light rays in Forrest are eventually reflected out. Indeed, this reference is silent as to blocking any of diagonal rays that may be emitted.


In contrast, by having the light-shielding layer and the light-gathering structure, respectively, overlying the electroluminescent device as, for example, illustrated in Figure 1, the present invention overcomes the obstacle of color purity degradation by taking into account color shift due to diagonal light. Figure 1 illustrates how light rays emitted in a diagonal direction, thus having a shorter wavelength, are spatially isolated according to the present configuration. Specifically, a light ray 20, emitted in the front direction, is transmitted through opening 16 to the outside. However, light ray 18, emitted diagonally, is blocked by the overlying light-shielding layer 17, and therefore not transmitted outside the display. *See* specification, pages 11-12, paragraph [0032]. In contrast, in the configuration of Forrest, all of the light rays emitted from OLED 113 are repeatedly reflected before allowed to be transmitted outside the display 100, thus failing to account for the effect of diagonal light on color purity. Accordingly, Applicants respectfully submit that because Forrest does not even recognize the problem of degrading color purity due to changes in observation position, it cannot teach or suggest the claimed solution.

Accordingly, Forrest does not render unpatentable independent Claims 1, 4, 14 and 15, which recite these features, nor any claim dependent thereon. Moreover, none of the secondary references supply that which is missing from Forrest et al.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Peter Saxon", written over a horizontal line.

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